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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/527,994	03/21/2005	Minobu Mizuno	10517/270	6303
23838	7590	05/26/2006	EXAMINER	
KENYON & KENYON LLP 1500 K STREET N.W. SUITE 700 WASHINGTON, DC 20005			PHAN, HAU VAN	
			ART UNIT	PAPER NUMBER
			3618	

DATE MAILED: 05/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/527,994	MIZUNO, MINOBU	
	Examiner	Art Unit	
	Hau V. Phan	3618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13 and 16-24 is/are rejected.
- 7) ☒ Claim(s) 14 and 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/21/05; 1/25/06</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 3/21/2005 and 1/25/2006 have been considered.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 13, 16-18, 20-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Riemer et al. (5,641,031).**

Riemer et al. in figures 2a-2b, disclose a fuel cell equipped vehicle (1) comprising a fuel cell (15) that generates electric power through a reaction between a fuel gas and an oxidizing gas. Riemer et al. also disclose a fuel gas tank (17) that stores the fuel gas to be supplied to the fuel cell, a fuel cell accessory or auxiliary units that operates when the fuel cell generates electric power, a storage battery that stores electric energy and

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an electric power control unit (14) that controls supply of electric power regarding the fuel cell and the storage battery, wherein the fuel cell, the fuel gas tank, the fuel cell accessory, the storage battery, and the electric power control unit are disposed below a floor of a passenger compartment of the vehicle (as shown in figure 2a).

14. (New) The fuel cell equipped vehicle according to claim 13, wherein the ' fuel gas tank, the fuel cell, the storage battery, and the electric power control unit are arranged in that written order in a longitudinal direction relative to the vehicle.

15. (New) The fuel cell equipped vehicle according to claim 13, wherein the fuel gas tank, the fuel cell, the electric power control unit, and the storage battery are arranged in that written order in a longitudinal direction relative to the vehicle.

Regarding claim 16, Riemer et al. disclose the fuel cell accessory, which is disposed at one or both of a right side and a left side of the fuel cell (see figure 2b).

Regarding claim 17, Riemer et al. disclose an upper surface of the fuel cell, an upper surface of the fuel gas tank, an upper surface of the fuel cell accessory, an upper surface of the storage battery, and an upper surface of the electric power control unit are at substantially equal heights (see figure 2a).

Regarding claim 18, Riemer et al. disclose the fuel cell, the fuel gas tank, the fuel cell accessory, the storage battery, and the electric power control unit that are mounted on an upper portion of a generally flat portion of a body frame of the vehicle which extends between a front wheel and a rear wheel (as shown in figure 2b).

Regarding claim 20, Riemer et al. disclose a radiator (33) that radiates heat from a cooling water for cooling the fuel cell, and that is disposed on a portion of a body

frame of the vehicle which extends between a central portion of the body frame and a forward portion of the body frame.

Regarding claim 21, Riemer et al. disclose the radiator that is disposed so as to lie between two frame rails of the body frame.

Regarding claim 22, Riemer et al. disclose at least one of a front wheel driving electric motor (13) and a rear wheel-driving electric motor (13, noticed col. 3, lines 1-3 disclose the motor can be provided on the front and rear axles), wherein the electric power control unit controls supply of electric power from the fuel cell and the storage battery to the at least one of the front wheel-driving electric motor and the rear wheel-driving electric motor.

Regarding claim 23, Riemer et al. disclose a gas pipe that supplies the fuel gas from the fuel gas tank to the fuel cell and an electrical wire that conducts electric power from the fuel cell and the storage battery to the electric power control unit, wherein the gas pipe is provided in one of a right-side portion and a left side portion of the vehicle, and the electrical wire is provided in another one of the right-side portion and the left-side portion of the vehicle (from figure 1 of the invention showing that the electric cable is on the right side only and the gas pipe is on the left side only, but the claim recite the electric cable located on both sides).

Regarding claim 24, Riemer et al. disclose a coolant circulator device that circulates a coolant for cooling the fuel cell, wherein a coolant circulation path of the coolant circulator device and the gas pipe are provided in one of the right-side portion

and the left-side portion of the vehicle, and the electrical wire is provided in another one of the right-side portion and the left-side portion of the vehicle.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Riemer et al. (5,641,031) as applied to claim 13 above, and further in view of Nagura et al. (6,648,085).**

Riemer et al. disclose the fuel cell, the fuel tank, the fuel accessory, the storage battery and the electric power control unit, but fail to show all of the them, which are disposed in a space formed between a right side frame and a left side frame of the vehicle in a longitudinal direction.

Nagura et al. in figures 1-4, teach fuel cell powered four wheel vehicle comprising a fuel cell system, which is positioned in a space between left and right side frames (12). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the fuel cell equipped vehicle of Riemer et al. with the fuel cell powered four wheels vehicle having a fuel cell system, which is positioned in a space between left and right frame as taught by Nagura et al. in order to keep the weight of the chassis of the vehicle in balance.

Allowable Subject Matter

7. Claims 14-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion


8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Mita et al. disclose an electric vehicle, Hirayama et al. disclose a fuel battery mounted motorcycle, Kato et al. disclose a fuel cell electric vehicle, Kawasaki et al. disclose a body structure of fuel cell vehicle.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hau V. Phan whose telephone number is 571-272-6696. The examiner can normally be reached on 7:30AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Ellis can be reached on 571-272-6914. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hau V Phan
Primary Examiner
Art Unit 3618



5/17/06